

KUMPRIYANOV, P.A., professor; GRIGOR'YEV, M.S., professor [reviewers]; MESHALKIN, Ye.N. [author].

"Techniques of intubation narcosis." E.N.Meshalkin. Reviewed by P.A. Kupriianov, M.S.Grigor'ev. Vest.khir. 73 no.5:78-79 S-0 '53.

(MLRA 6:11)

(Anesthesia) (Meshalkin, E.N.)

1. KUMSARE, A. Ya.
2. USSR (600)
4. Lielance, Lake - Plankton
7. Annual development cycle of the phytoplankton of Lake Lielance. Latv PSR Zin Akad Vestis No. 10 1951.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KUMSARE, A. Ya. In Latvian

KUMSARE, A. Ya. -- "Phytoplankton of the Lower Course of the Daugava River."  
Acad Sci Latvian SSR, Inst of Microbiology, 1953. In Latvian (Dissertation for the  
Degree of Candidate of Biological Sciences)

SO: Izvestiya Ak. Nauk Latvyskov SSR, No. 9, Sept., 1955

KUMSALE, A. Ya.

Food basis for fish-planktonophages in Latvian industrial lakes. p. 115.

PTOLOUCHESKAYA NAUKA; SELSKOMU I LESKOMU KHOZJAISTVU. (Latvian: PER  
Zinatnu akademijs. Biologijas zinatnu nodale) Riga, Latvia, No. 3, 1957.

Monthly list of East European Accessions (SEAI), IC, Vol. 8, No. 8,  
August 1959.  
Uncle.

KACALOVA, O.; KUMSARE, A.; KUNDZINS, M.; SKLENNIKS, C., red.;  
CERNOBROVA, L., tekhn. red.

[Large lakes in the vicinity of Riga] Lielie ezeri Rīgas ap-  
kartne. Rīga, Latvijas PSR Zinātnu Akadēmijas Izdevniecība,  
1962. 66 p. (MIRA 16:2)

(Riga region--Lakes)

KOMSIAHVILI, G.P., inzh.

Study of the control stability of power plant machines in consolidated electrical systems. Trudy VNIIE no.18:128-136 '64.

(MIRA 19:6)

KUMSIASHVILI, G.P., aspirant

Physical modeling of a hydraulic turbine and generator  
MEI no.46:133-140 '63.

Basis for the parameters of a hydroelectric power system laboratory.  
Ibid.141-158 (MIRA 18:3)

1. Kafedra gidroenergetiki Moskovskogo ordena Lenina energeticheskogo  
instituta.

KUMSIASHVILI, G.P.

Study of the stability of regulation of thermal electric power  
plant blocks in composite power systems. Izv. AN Arm. SSR. Ser.  
tekh. nauk 17 no.2:21-28 '64 (MIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektroener-  
getiki.



KUMSIASHVILI, G.P.

Stability of the regulation of station generator units in power  
generating systems. Dokl. AN Arm. SSR 38 no.4:231-234 '64.

(MIRA 17:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektroenergetiki.  
Predstavleno akademikom AN Armyanskoy SSR I.V.Yegiazarovym.

KUPELICHVILI, M.I.

Eclipsing variable KZP 5708 (S 4695). Publ. Abast. astrofiz.  
obser. no.30:45-48 '64. (MIRA 17:5)

KUMSIASHVILI, R.N. (Tbilisi, ul. Atarbekova, d.4)

Penetration of an esophageal ulcer into the aorta. Vest.khir. 78  
no.6:116-118 Je '57. (MLRA 10:8)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. I.K.Pipina)  
lechebnogo fakul'teta Tbilisskogo meditsinskogo instituta

(PEPTIC ULCER, surg.

post-gastrectomy ulcer of esophagus penetrating into  
aorta)

(GASTRECTOMY, compl.

ulcer of esophagus penetrating into aorta following  
numerous interventions for peptic ulcer)

KUMSISHEVILI, N.G., inzh.; KRADENOV, N.I., inzh.

Learning to work with prestressing beds. Bet. 1 zhel.-bet. no.8:375-  
376 Ag '60. (MIRA 13:8)

(Prestressed concrete)



CHAVCHANIDZE, V.V.; SHADURI, R.S.; KUMSISHVILI, V.A.

Mosaic method of preparing programs for the calculation of an  
electron-photon cascade by means of an electronic computer  
using the Monte Carlo method. Trudy Inst.fiz.AN Gruz.SSR  
6:59-95 '58. (MIRA 15:4)  
(Programming (Electronic computers))  
(Particles (Nuclear physics))

56-34-4-20/60

AUTHORS: Chavchanidze, V. V., Shaduri, R. S., Kumsishvili, V. A.

TITLE: The Calculation of the Electron-Photon Cascade in Lead by the Monte Carlo Method (Raschet metodom Monte-Karlo elektronno-fotonnogo kaskada v svintse)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 34, Nr 4, pp. 912 - 915 (USSR)

ABSTRACT: This work describes the statistical probability molding based on the method of random trials (a modification of the method by Monte Carlo). This work only describes the scheme of the calculation of the cascade omitting details. The range of the  $\gamma$ -quantum in lead until the first process of interaction is "drawn". The "drawing" is made for the integral curve of the dependence of the total cross section on the energy of the quantum. Then the "fate" of the  $\gamma$ -quantum is drawn. In the case of pair production the energy of the positron is drawn and from it then the energy of the electron is ascertained. Subsequently the amounts of the ionization losses and thus also of the energy of the components of the pair before the following

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The Calculation of the Electron-Photon Cascade in Lead 56-34-4-20/60  
by the Monte Carlo Method

collisions are determined. Simultaneously also the correction for the multiple scattering is "drawn". The energy of the bremsstrahlung quantum was ascertained by the method of the construction of non-normalized integral curves with unequal argument scales. The scattering angles were "drawn" without consideration of the correlation between the scattering angles of the quantum of the electron. In the case of destruction the scattering angle of the one  $\gamma$ -quantum in the center of mass system is "drawn". From the data obtained by this also the scattering angle of the second quantum is ascertained. The results thus obtained are plotted in form of curves for the energy distribution and for the angular distribution of the electrons, positrons, and  $\gamma$ -quanta (as functions of the generating angle of the observation cone). The computation of the electron-photon cascade is unusually long. For the factual performance of the computations electronic high-speed computers are necessary. The existing machines need not be rebuilt at all but a correspondingly performed programming is sufficient. Here 2 of such programming methods are shortly described. It is a particularity

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The Calculation of the Electron-Photon Cascade in Lead 56-34-4-20/60  
by the Monte Carlo Method

of the first method that in the constant memory the arguments of the given probability functions are stored in a certain order. The second programming method allows the introduction of these functions into the storing device. According to the opinion of the authors the whole efficiency of the calculations by the method of random trials shows up only in case of the application of electronic computers and in case of adapted programming. The authors thank A. V. Tagviashvili, B. I. Bondarevich, L. L. Esakiya, G. A. Goradze, M. Ye. Perel'man, G. A. Almanov for their participation in the practical performance of the computations. This work was performed on the suggestion by Professor V. P. Dzhelepov in connection with the necessary estimation of the probability of the non-emission of electrons and positrons from lead plates of little thickness. The authors thank Professor Dzhelepov and his collaborators for his attentiveness and his interest in this work. There are 3 figures and 7 references, 4 of which are Soviet.

Card 3/4

The Calculation of the Electron-Photon Cascade in Lead 56-34-4-20/60  
by the Monte Carlo Method

ASSOCIATION: Institut fiziki Akademii nauk Gruzinskoy SSR (Institute of Physics  
AS, Georgian SSR)

SUBMITTED: September 23, 1957

1. Lead--Nuclear reactions

Card 4/4

10110

S/194/62/000/006/065/232  
D295/D308

16.12.00

AUTHORS: Chavchanidze, V.V., and Kumsishvili, V.A.

TITLE: Determination of distribution laws on the basis of a small number of observations

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1962, abstract 6-2-166 n (V sb. Primeneniye vychisl. tekhn. dlya avtomatiz. proiz-va, M., Mashgiz, 1961, 129-139)

TEXT: An empirical method is suggested for determining the distribution functions of a random quantity  $X$  for the case when the number of measured values of this quantity is small ( $n < 10$ ). The method is based on the use of a-priori notions on the probability-density function  $f(x)$ . It is assumed that  $f(x)$  is a continuous function and that  $f(x) \geq 0$  for  $a < x \leq b$ , while  $f(x) \equiv 0$  for  $x < a$  and  $x > b$ , i.e. the interval of possible values of  $f(x)$  is finite and known.  $f(x)$  is found as the sum of so-called contribution functions multiplied by suitable weighting coefficients. Contribution functions are meant as arbitrary functions constructed in the neighborhood of the point  $x$ .  
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Determination of distribution laws ... S/194/62/000/006/065/232  
D295/D308

hood of  $x_1$  the probability density is different from zero. The summation of the contribution functions is based on the fact that each of them supplements, and makes more precise the information obtained from the preceding one. The zero-order contribution function  $f_0(x)$  represents a uniform distribution of the quantity  $X$ , since the statement of the equi-probability of the values  $x_1$  does not contradict the preliminary information. The weighting coefficients are chosen to be equal on the assumption of the equivalence of the information obtained from each  $x_1$ . For a contribution function having a rectangular form, symmetrical with respect to  $x_1$ , the weighting coefficients are chosen equal to  $1/(n + 1)$  from a normalization condition. Thus the approximate probability-density function assumes the form

$$f_n(x) = \frac{1}{n + 1} \left\{ f_0(x) + \sum_{i=1}^n \Psi_{x_i}(x) \right\}, \text{ where } \Psi_{x_i}(x) \text{ are the contribu-}$$

Card 2/3

Determination of distribution laws ... S/194/62/000/006/065/232  
D295/D308

tion functions. The method given has been tested for two types of probability distributions: the uniform and the gaussian distributions. Results of its comparison with the known classical method for  $n = 3; 4; 6; 10$  are given. For each  $n$ ,  $N = 50$  constructions of the probability-density function were carried out. As a measure of the accuracy the quantities  $\eta_N$  and  $D\eta$  were taken, where  $\eta = \max/F(x) - F_n(x)/$ ,  $\eta_N$  is an averaged value with respect to  $N$ ,  $F(x)$  is the true distribution,  $F_n$  is a distribution constructed empirically,

and  $D\eta = \left\{ \sum_{i=1}^n (\bar{\eta} - \eta_i)^2 / (N - 1) \right\}^{1/2}$ . Calculations show that for

small values of  $n$  the method of symmetrical contributions gives indisputably better results. The method allows simple execution of calculations on computers. 4 references. [Abstractor's note: Complete translation.]

Card 3/3

CHAVCHANIDZE, V.V.; BUKREYEV, I.N.; MIKELADZE, Z.N.; KUMSISHVILI, V.A.

A new method for adding and subtracting binary digits by  
high-speed digital computers. Trudy Inst.fiz.AN Gruz.SSR  
8:313-321 '62. (MIRA 16:2)  
(Electronic digital computers)

ACCESSION NR: AR4035563

S/0271/64/000/003/B010/B010

SOURCE: Ref. zh. Avtomat., telemekh. i vy\*chisl. tekhn. Av. t. , Abs. 3850

AUTHOR: Bokuchava, I. T.; Chavohanidze, V. V.; Kumsishvili, V. A.

TITLE: Stochastic-logical generation of digital aggregates

CITED SOURCE: Tr. In-ta kibernetiki. AN GruzSSR, v. 1, 1963, 25-35

TOPIC TAGS: stochastic process, stochastic process generation, Markov chain generation, stochastic logical generation

TRANSLATION: Generation of stochastic processes, particularly, of a simple homogeneous Markov's chain with a discrete time by means of functions of the algebra of logic is considered. Four generator types developing one and  $n$  symbols per unit of time are presented. For each generator, probabilities of  $p_{ij}$  - transitions from the  $i$ -th state to the  $j$ -th state are calculated; the maximum probabilities  $R_i$  of the transitions are needed for estimating the process entropy. It is proven that by selecting suitable values of probability of using various logical functions, random processes with the required  $p_{ij}$  and  $R_i$  can be obtained, i. e., the stochastic process can be controlled in a certain sense. An example is

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ACCESSION NR: AR4035563

given. Bibliography: 5 titles.

DATE ACQ: 17Apr64

SUB CODE: MA

ENCL: 00

Card 2/2



ACCESSION NR: AR4031086

S/0044/64/000/002/V013/V013

SOURCE: Referativnyy zhurnal. Matematika, Abs. 2V77

AUTHOR: Namoradze, N. Z.; Chavchanidze, V. V.; Kumsishvili, V. A.

TITLE: A statistical-probability simulation for making linear polymeric chains conformal in strongly diluted openings

CITED SOURCE: Tr. In-ta kibernetiki, AN GruzSSR, v. 1, 1963, 93-103

TOPIC TAGS: statistical-probability simulation, conformal linear polymeric chain, polymer configurational statistics, vinyl polymer chain

TRANSLATION: The authors consider a new method for studying the configurational statistics of polymers and they demonstrate the fundamental possibility of a statistical-probability simulation for polymeric chains. They compare an algorithm for calculating, by means of the Monte-Carlo method, the conformation of separate chains of vinyl polymers with massive weights. Authors' abstract

DATE ACQ: 19Mar64

SUB CODE: CH

ENCL: 00

1/1

KUMSISHVILI, Ya. I.

"Radiometry of the Solar Corona During the June 30, 1954 Total Solar Eclipse"

(Total Eclipse of the Sun, February 25, 1952 and June 30, 1954, Transactions of the Expedition to Observe Solar Eclipses) Moscow, Izd-vo AN SSSR, 1956. 357 p.

KUMSISHVILI, Ya.I.

Radiometry of the solar corona. Astron. tsir. no. 156:5-6 Ja'55.  
(Sun--Corona) (MLRA 8:10)

KUMSISHVILI, Ya.I.

Electrocolorimetric study of  $\gamma$  Eridani [with summary in English]. Per.zvezdy 11 no.1:42-49 Ja '56. (MLRA 10:2)

1. Abastumanskaya astrofizicheskaya observatoriya.  
(Stars, Variable)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.; RAZMADZE, N.A.

Photoelectric observations of the spectroscopic binary BD +  
39°811 [with summary in English] Biul. Abast. astrofiz.  
obs. no.20:11-15 '56. (MLRA 9:12)

(Stars, Double) (Photoelectric measurements)

KUMSISHVILI, Ya.I.

Radiometric observation of the solar corona at the total eclipse of June 30, 1954 [in Georgian with summaries in Russian and English]. Biul. Abast. astrofiz. obser. no. 20:17-27 '56.

(MLRA 9:12)

(Sun--Corona) (Eclipses, Solar--1954)  
(Radio astronomy)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Spectral binary BD--8 19 is an eclipsing variable. Astron.tsir.  
no.166:20-21 Ja '56. (MLRA 9:7)

1.Abastumanskaya astrofizicheskaya observatoriya AN Gruzinskoy SSR.  
(Stars, Variable) (Stars, Double)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Photoelectric observations of the recurrent Nova RS Ophiuchi.  
Astron. tsir. no.199:17-18 Ja 1959. (MIRA 13:2)

1. Abastumanskaya astrofizicheskaya observatoriya AN GruzSSR.  
(Stars, New)



MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.; RAZMAIZE, N.A.

Electrophotometry of spectral binary BD--39<sup>0</sup>811. Astron.tsir.  
no.166:21 Ja '56. (MLRA 9:7)

1.Abastumanskaya astrofizicheskaya observatoriya AN Gruzinskoy SSR.  
(Stars, Double)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Electrocolorimetric observations of star HD 184930. Astron. tsir. no. 166:  
21 Ja '56. (MIRA 9:7)

1. Abastumanskaya astrofizicheskaya observatoriya AN Gruzinskoy SSR.  
(Stars—Color)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Electrophotometry of the spectroscopic binary star  $\Sigma 12A$ .  
Bibl. Abast. astrofiz. obser. no. 22:3-6 '58. (MIRA 11:12)  
(Stars, Double)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Photoelectric observations of 12 Lacertae. Biul.Abast.astrofiz.  
obs. no.22:7-18 '58. (MIRA 11:12)  
(Stars, Variable)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Photoelectric photometric observations of the star HD 217050.  
Bibl.Abast.astrofiz.obser. no.22:19-24 '58. (MIRA 11:12)  
(Stars, Variable)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Changes in the luminosity and the color of  $\gamma$  Pegasi. Astron. tsir.  
no.192:23-24 My '58. (MIRA 11:10)

1. Abastumanskaya astrofizicheskaya observatoriya AN Gruzinskoy  
SSR.

(Stars, Variable)

KUMSISHVILI, Ya.I.

Investigation of the irregular variation of the brilliance  
of  $\mu$  Eridani. Soob. AN Gruz. SSR 22 no.1:33-40 Ja '59.

(MIRA 12:5)

1. AN GruzSSR, Abastumanskaya astrofizicheskaya observatoriya.  
Predstavleno akademikom Ye.K.Kharadze.  
(Stars, Variable)

MAGALASHVILI, N.; KUMSISHVILI, Ya.

Changes in brightness and color of Ceti. Astron. tsir. no.201:15-16  
Ap '59. (MIRA 13:2)

1. Abastumanskaya astrofizicheskaya observatoriya AN GruzSSR.  
(Stars, Variable)



KUMSISHVILI, Ya. I., Cand Phys-Math Sci -- (diss) "Electrophotometric study of the variable star Eridan." Tbilisi, Academy of Sciences Georgian SSR Publishing House, 1960. 7 pp; (Ministry of Higher Education Ukrainian SSR, Odessa State Univ im I. I. Mechnikov); 120 copies; free; (KL, 51-60, 115)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Electrocolorimetric observations of Pegasi. Per.zvezdy 13  
no.1:37-40 Ap '60. (MIRA 14:3)

1. Abastumanskaya astrofizicheskaya observatoriya.  
(Stars, Variable)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Electrophotometry of  $\delta$  Ceti. Biul. Abast. astrofiz. obser. no. 26:  
3-11 '61. (MIRA 15:3)

(Stars, Variable)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Spectroscopic binary  $\alpha$  Virginis (Spica). Biul.Abast.astrofiz.-  
obser. no.26:13-19 '61. (MIRA 15:3)  
(Stars, Double)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya, I.

Spectroscopic binary star  $\alpha$  Virginis. Astron. tsir. no. 219:30  
Mr '61. (MIRA 14:10)

1. Abastumanskaya astrofizicheskaya observatoriya.  
(Stars, Double)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Determining the radius of CC Andromedae. Astron.tsir. no.226:7  
O '61. (MIRA 16:1)

1. Abastumanskaya astrofizicheskaya observatoriya.  
(Stars, Variable)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Determining the radius of CC Andromedae. Biul. Abast. astrofiz.  
observed, no.28:3-9 '62. (MIRA 16:7)  
(Stars, Variable)

KUMSISHVILI, Ya.I.

Electrophotometric study of  $\gamma$  Eridani. Biul. Abast. astrofiz.  
obs. no.28:11-85 '62. (MIRA 16:7)  
(Photometry, Astronomical)



MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

KP Persei. Astron. tsir. no.231:20 N '62.

(MIRA 16:4)

1. Abastumanskaya astrofizicheskaya observatoriya.  
(Stars, Variable)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Eclipsing variable V 502 Ophiuchi. Biul. Abast. astrofiz. obser.  
no.30:39-43 '64. (MIRA 17:5)

KURGISHVILI, Ya.I.; MAGALASHVILI, N.L.; ABULADZE, O.P.

Electrocolorimetry of R<sup>h</sup> Aurigae. Biol. Abast. astrofiz.

obser. no.30:33-38 '64.

(MIRA 17:5)

MAGALASHVILI, N.L.; KUMSISHVILI, Ya.I.

Variable luminosity and color in  $\gamma$  Bootis. Biul. Abast. astrofiz. obser.  
32:3-7 '65.

Semiregular variable stars RW Cygni, SU Persei, and UX Draconis.  
Ibid. 9-20 (MIRA 18:10)

KUMSIYEV, Sh. A.

Zondirovanie v diagnostike i terapii boleznei pishchevaritel'nogo  
trakta sel'skokhoziaistvennykh zhivotnykh / Diagnostic and therapeutic  
sounding in diseases of the digestive tract in farm animals/. Moskva,  
Sel'khozgiz, 1953. 198 p.

S0: Monthly List of Russian Accessions Vol. 6 No. 7 October 1953

KUMSIYEV, Sh.A., dotsent.

Tonometric examination of the motor function of the stomach  
in solid hoofed animals and of the first stomach in ruminants.  
Veterinariia 31 no.2:49-51 F '54. (MLRA 7:2)

1. Moskovskiy tekhnologicheskii institut myasnoy i molochnoy  
promyshlennosti. (Stomach) (Veterinary physiology)

Kumseyev, Sh. A.

USSR/Medicine - Veterinary, Probes

Card 1/1

Author : Kumseyev, Sh. A., Docent

Title : Speeding up withdrawal of contents of the rumen in cattle

Periodical : Veterinariya, 31, 55-57, Apr 1954

Abstract : Inserting two probes, one into each nostril, is a new method recommended for withdrawing contents of rumen of cattle. This method can be used in emergency cases of overdistention of the rumen and is harmless. Water is poured into one probe and the loosened contents of the rumen pass out through the other probe. This method is superior to any other method that has been in use. Illustrations.

Institution : Moscow Chemicotechnological Institute of Meat Industry

Submitted :

Name: KUMSEYEV, Shalv Alekseyevich

Dissertation: Hydrotherapy of agr animals with  
disordered function of the stomach

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000927520005-1  
(on the basis of experimental physiology, pathology, and therapy)

Degree: Doc Vet Sci

Affiliation: Moscow Technological Inst of Meat  
and Dairy Industry

Defense Date, Place: 26 Oct 56, Council of Moscow Vet Acad

Certification Date: 8 Jun 57

Source: BMVO 16/57

KUMSIYEV, SH. A.

KUMSIYEV, Sh. A.: "The hydrotherapy of agricultural animals with disorders to stomach functions (based on experimental physiology, pathology, and therapy)." Moscow Veterinary Academy, Min Higher Education USSR. Moscow, 1956. (Dissertations for the Degree of Doctor in Veterinary Sciences).

SO: Knizhnays letopis' No. 35, 1956. Moscow



IONOV, Petr Semenovich; KUMSIYEV, Shalva Aleksseyevich; SHAPTALA, Ivan  
Prokof'yevich; MUSIN, A.D., red.; GOR'KOVA, Z.D., tekhn.red.

[Principles of therapeutic practice in veterinary medicine;  
with elements of diagnosis] Osnovy terapevticheskoi tekhniki  
v veterinarii; s elementami diagnostiki. Moskva, Gos.izd-vo  
sel'khoz.lit-ry, 1957. 274 p. (MIRA 11:1)  
(Veterinary medicine)

KUMSIYEV, Sh.A., dotsent.

Hydrotherapy for domestic animals with impairment of gastric functions. Veterinariia 34 no.1:49-59 Ja '57. (MLRA 10:2)

1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy promyshlennosti i Moskovskaya veterinarnaya akademiya.  
(Stomach--Diseases) (Hydrotherapy)  
(Veterinary medicine)

KUMSIYEV, Sh. A., doktor vet. nauk

Problems in veterinary stomatology. Veterinariia 35 no.11:  
37-41 N '58. (MIRA 11:10)

1. Moskovskiy tekhnologicheskii institut myasnoy i molochnoy  
promyshlennosti.

(Veterinary medicine) (Mouth--Diseases)

KUMSIYEV, Sh.A., doktor veter.nauk

Diagnostic importance of investigating the anus and rectum.  
Veterinariia 37 no.1:54-58 Ja '60. (MIRA 16:6)

1. Moskovskiy tekhnologicheskii institut myasnoy i molochnoy  
promyshlennosti.

(Anus) (Rectum)

IONOV, P.S., prof.; KUMSIYEV, Sh.A., doktor veterinarnykh nauk

Method for studying the urinary systems of mares and cows.  
Veterinariia 37 no.9:54-55 S '60. (MIRA 14:11)

1. Moskovskiy tekhnologicheskii institut myasnoy i molechnoy  
promyshlennosti.

(Mares)

(Cows)

(Urinary organs)

IONOV, P. S., RADKEVICH, P. E. and KUMSIYEV, Sh. A.

"Internal non-infectious diseases of cattle."  
M. Sel'khozgiz, 1961.

Veterinariya, vol. 39, no. 8, August 1962, p. 88

KUMSIYEV, Shalva Alekseyevich, prof., doktor veter. nauk; SOKOLOVA,  
G.S., red.; FEDOTOV. V.G., red.; SAYTANIDI, L.D., tekhn.  
red.

[Diagnosis and treatment of diseases of the digestive organs  
in animals] O diagnostike i terapii zhivotnykh s zabolevani-  
ami organov pishchevarenia. Moskva, Izd-vo M-va sel'skogo  
khoziaistva RSFSR, 1962. 95 p. (MIRA 16:3)

(Digestive organs--Diseases)  
(Veterinary medicine)

KUMSIYEV, Shalva Alekseyevich, doktor veter. nauk; FEFERMAN, A.Ye.,  
red.

[Methods for the examination and treatment of animals  
with diseases of the digestive organs] Metody obsledova-  
niia i terapii zhivotnykh s zabolevaniiami organov pi-  
shechovareniiia. Moskva, Rossel'khozizdat, 1965. 196 p.  
(MIRA 19:1)



KUMSKAYA, N.M.; MAKAROVCHIN, B.A.; KUDRINA, M.A.

X-ray examination of chevkinite. Min.syr'e no.8:68-77 '63.  
(MIRA 17:9)

KUMSKOV, V.A., polkovnik, Geroy Sovetskogo Soyuz

Aerial reconnaissance by fighter planes flying in pairs. Vest.Vozd.  
Fl. no.3:19-22 Mr '60. (MIRA 13:9)  
(Aeronautics, Military—Observations)

SHUBNIKOV, A.K., professor. redaktor; ~~TEBENIKHIN~~, Ye.F.; SHAPROV, M.F.;  
ZAKHAROV, A.N.; ~~KUMSKOV~~, V.T., kandidat tekhnicheskikh nauk,  
redaktor; VERINA, G.P., tekhnicheskiiy redaktor

[Technology of fuels, water and lubricants] Tekhnologiya topliva,  
vody i smazki. Moskva, Gos. transp. zhel-dor. izd-vo, 1954. 404 p.  
(Fuel) (Water) (MLRA 7:10)  
(lubrication and lubricants)

KUMSKOV, V.T., kandidat tekhnicheskikh nauk.

Investigation of the operation of scale removers. Trudy MIIT  
no.82/83:46-61 '55. (MLBA 9:8)  
(Locomotive boilers)

SOV/81-59-13-46029

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 13, p 253 (USSR)

AUTHORS: Goryainov, L.I., Kumskov, V.T.

TITLE: On the Convective Component of a Complex Heat Exchange at High Temperatures <sup>21</sup>

PERIODICAL: Sb. Leningr. in-ta inzh. zh.-d. transp., 1958, Nr 160, pp 234 - 240

ABSTRACT: It has been found that the equations of convective heat emission, derived on the basis of the generalization of experimental data obtained at relatively low temperatures, cannot be applied without experimental checking to the calculation of heat emission in the complex process of heat exchange at relatively high temperatures; if the physical parameters are referred to the average temperature of the flow. In the application of the mentioned equations corrections must be introduced, e.g. in the form of a temperature simplex. It has been noted that the described method of using the equations of convective heat emission is suitable for the calculation of heat emission in the combustion chambers of boilers, in gas turbines and other heat-exchanging installations. <sup>22</sup>

From the author's summary

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18(5)

AUTHOR:

SOV/123-59-9-8/25  
Ninua, N.Ye., and Kumskov, V.T., and Aksenov K.F.,  
Candidates of Technical Sciences

TITLE:

Regenerative Air Heating in Cupolas

PERIODICAL:

Liteynoye proizvodstvo, 1959, Nr 9, pp 27-29 (USSR)

ABSTRACT:

Utilization of cupola outlet gases represents one of the most important factors in increasing foundry productivity. The Iron Foundry imeni Voykov has introduced an air-heating process whereby the outlet gases having a temperature of 500° - 800°C are passing through a number of balls placed in a cylinder (Fig 6). The air-heater is provided with a rotor that has 12 sectors and serves for rotation of the balls. The optimum diameter of balls may vary from 3 to 10 mm depending on the cleanliness of gases passing through them. The function of the air-heater consists of an alternating admission of hot gases and cool air into the cylinder. The gases entering the air-heater are giving a part of their heat to the balls which, in turn, heat up the air passing through the cylinder. Thus, the gases cool off from 800°C to 250°, while the air becomes heated up to 400° - 420°C. Rotation

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SOV/128-59-9-8/25

Regenerative Air Heating in Cupolas

of balls intensifies the process of heat-exchange between the gases and the balls, and favors the rate of air-heating. At the same time, the air-heater serves as a cleaning medium purifying the cupola outlet gases. There are 4 graphs, 6 diagrams and 2 Soviet references.

Card 2/2

GORYAINOV, L.A., inzh.; KUMSKOV, V.T., kand. takhn. nauk

Calculating the radiant component of combined heat exchange. Trudy  
MIIT no.112:130-140 '59. (MIRA 13:2)  
(Heat--Radiation and absorption)



KUMSKOV, V.T., kand.tekhn.nauk; KONAKOV, P.K., doktor tekhn.nauk;  
NIKITIN, Ye.A., inzh.; AKSENOV, K.F., kand.tekhn.nauk;  
GUTKIN, L.V., kand.tekhn.nauk; BOBROVA, Ye.N., tekhn.red.

[Thermal processes in electric and diesel locomotives] Teplo-  
nye protsessy teplovozov i elektrovozov. Moskva, Vses.izda-  
tel'sko-poligr.ob"edinenie M-va putei soobshcheniya, 1960. 178 p.  
(MIRA 13:11)

(Diesel locomotives)

(Electric locomotives)

S/170/60/003/011/016/016  
B019/B056

AUTHORS: Kumskov, V. T., Pokalyuk, A. I., Smirnov, V. A.

TITLE: Intercollegiate Conference on the Principle of Similarity  
and Its Application in Heat Engineering ✓

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 11,  
pp. 120-124

TEXT: From June 6 to June 10, 1960, the mezhvuzovskaya konferentsiya po teorii podobiya i yeye primeneniyu v teplotekhniki (Intercollegiate Conference on the Principle of Similarity and Its Application in Heat Engineering) was held at the Moskovskiy institut inzhenerov transporta (MIIT) (Moscow Institute of Transportation Engineers). The Conference was attended by roughly 500 scientific workers. 68 lectures were delivered. After the opening words spoken by the President of the Organization Committee, Deputy Chief of the MIIT, Professor A. I. Ioannisyan, Professor P. K. Konakov (MIIT) began his lecture on "The Present Stage of the Principle of Similarity and the Perspectives of Its Application in Heat Engineering". Academician of the AS BSSR, A. V. Lykov of the Institut

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Intercollegiate Conference on the Principle  
of Similarity and Its Application in Heat  
Engineering

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B019/B056

energetiki AN BSSR (Institute of Power Engineering of the AS BSSR) investigated problems of the integral transformations and operator methods and their relations to the principle of similarity. Professor V. A. Venikov of the Moskovskiy energeticheskiy institut (Moscow Institute of Power Engineering), holder of the Lenin Prize, investigated problems concerning the relations between investigations carried out on models, in nature, and analytical investigations. Professor S. G. Teletov of the Institut atomnoy energii AN SSSR im. I. V. Kurchatova (Institute of Atomic Energy of the AS USSR imeni I. V. Kurchatov) in his lecture studied the planning of experimental investigations in correspondence with the demands made by the principle of similarity. According to the opinion of Professor A. A. Gukhman of the Moskovskiy institut khimicheskogo mashinostroyeniya (Moscow Institute of Machine Construction), the most important problem is that of the development of methods, by means of which it is possible to built up the characteristic variables of a physical problem. Professor Ye. V. Kudryavtsev of the ENIN AS USSR attached great importance to the principle of similarity in the investigation of heat exchange processes. Professor L. I. Kudryashchev of the Kuybyshevskiy aviatsionnyy institut

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(Kuybyshev Aviation Institute) and Candidate of Technical Sciences  
A. G. Temkin of the Kaliningradskiy tekhnicheskii institut rybnoy  
promyshlennosti i khozyaystva (Kaliningrad Technical Institute of the  
Fisheries and Economics) also delivered lectures which are not dealt with  
in detail. The theoretical section of the Conference was under the chair-  
manship of Professor Konakov. Here, 17 lectures were delivered. The lecture  
by B. V. Kantorovich of the Institut goryuchikh iskopayemykh AN SSSR  
(Institute of Fuel Minerals of the AS USSR) had the title "The Application  
of the Principle of Similarity in Investigations of Combustion Processes".  
The lectures delivered by V. A. Shvab, M. Ye. Dogin of the Tomskiy  
elektromekhanicheskiy institut inzhenerov zheleznodorozhnyy transporta  
(Tomsk Electromechanical Institute for Railroad Engineers) and by  
Z. M. Kudryavtseva of the TsNIIchermet dealt with the application of the  
principle of similarity in investigations of the motions of drop-gas  
mixtures in pipelines. The lectures delivered by Professor L. I.  
Kudryashov (Kuybyshev Aviation Institute) and Professor A. V. Teplov  
of the Voyennaya akademiya tyla i transporta (Military Academy for  
Supplies and Transportation) dealt with the gas-dynamical simulation of

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municipal gas lines. V. M. Golovin (Kuybyshev Aviation Institute) dealt with the estimation of the dissipation of mechanical energy in motions of liquids. V. O. Fogel of the Moskovskiy institut tonkoy khimicheskoy tekhnologii (Moscow Institute of Chemical Technology) investigated the application of the principle of similarity and the electric simulation for the investigation of vulcanization processes. A. V. Temikov (Kuybyshev Aviation Institute) delivered a lecture on "The Similarity of Phenomena of Nonsteady Heat Conduction in Metals". G. P. Ivantsov (TsNIIchermét) dealt with the application of gauge transformations to problems of mathematical physics and heat engineering. A. M. Kulik (Institute of Atomic Energy of the AS USSR imeni I. V. Kurchatov) investigated the application of the principle of similarity to nonsteady temperature fields. Yu. N. Zakharov of the Novosibirskiy institut inzhenerov vodnogo transporta (Novosibirsk Institute for Water-transportation Engineers) investigated the rules governing the functioning of jets. The application of the principle of similarity for the purpose of investigating the nonsteady temperature fields in complex bodies was dealt with by A. G. Temkin. A. M. Shedrin of the Nauchno-issledovatel'skiy institut sel'skogo stroitel'stva (Scientific

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Research Institute for Rural Constructions) investigated the application of the principle of similarity to elasticity effects. The section for heat-mass exchange was under the chairmanship of Academician of the AS BSSR A. V. Lykov. Yu. A. Mikhaylov of the Institut energetiki i elektrotekhniki AN Latv. SSR (Institute of Power Engineering and Electrotechnics of the AS Latvyskaya SSR) investigated heat-mass exchanges in disperse media. A. V. Ralko of the Kiyevskiy politekhnicheskii institut (Kiyev Polytechnic Institute) investigated the simulation of glowing processes. G. N. Sizov of the Tsentral'nyy nauchno-issledovatel'skiy institut ekonomiki i ekspluatatsii vodnogo transporta (Central Scientific Research Institute for the Productivity and Exploitation of Water Transports) investigated the simulation of the turbulent heat exchange. Z. M. Miropol'skiy of the Mskovskiy lesotekhnicheskii institut (Moscow Institute of Forestry) investigated the heat exchange in the condensation of high tension steam. B. I. Kolbasov (Institute of Atomic Energy of the AS USSR imeni Kurchatov) spoke about the results of an investigation of the heat exchange in the critical region in the flow of carbonic acid in tubes. Most of the lectures were delivered in the section for heat exchange. The section was supervised

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by Professor P. N. Pomanenko. Professor A. M. Gurvich of the TsKTI imeni Polzunov reported on research work in the Laboratoriya luchistogo teploobmena TsKTI (Laboratory of Radiation Heat Exchange of the TsKTI) carried out in the course of recent years. Ye. P. Karasev of the Lenin-gradskoye vyssheye voyenno-morskoye inzhenernoye uchilishche im. Dzerzhinskogo (Leningrad Higher Naval Engineering School imeni Dzerzhinskiy) dealt with the simulation of steam aggregates. P. N. Pomanenko investigated the resistance and the heat exchange of a turbulent gas flow in diffuser-channels. V. P. Motulevich of the ENIN AS USSR dealt with the heat exchange and the friction of plates in a gas flow. B. S. D'yachenko of the Nikolayevskiy korablestroitel'nyy institut im. admirala Makarova (Nikolayev Shipbuilding Institut imeni Admiral Makarov) dealt with the estimation of heat exchangers of gas turbines in shipbuilding. V. G. Dorofeyev of the Novocherkasskiy politekhnicheskiy institut (Novocherkassk Polytechnic Institute) gave the results of an investigation of the heat exchange of electrolocomotive resistors. P. M. Brdlik G. Ye. Verevochkin, and V. A. Smirnov (MIIT, ENIN AS USSR) investigated the heat exchange between jets and plates. Ye. V. Kudryavtsev and K. N. Kachalev (ENIN AS

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USSR) investigated the operation of an electronic universal calorimeter. K. F. Aksenov of the Vsesoyuznyy zaochnyy institut inzhenerov transporta (All-Union Correspondence Institute for Transportation Engineers) reported on experimental data concerning a heat exchanger. S. S. Filimonov and B. A. Khrustalev (ENIN AS USSR) reported on thermotechnical investigations of the flow of a liquid through tubes. A. I. Leont'yev (Moscow Institute of Forestry), N. Ye. Ninua of the Gruzinskiy politekhnicheskii institut (Georgian Polytechnic Institute), G. P. Boykov (Tomsk Polytechnic Institute), I. S. Kochenov, and G. Ye. Morozov (Institute of Atomic Energy of the AS USSR imeni I. V. Kurchatov), A. A. Smirnov (Kuybyshev Aviation Institute), and V. G. Ushakov of the Novocherkasskiy politekhnicheskii institut (Novocherkassk Polytechnic Institute) delivered lectures which are mentioned in passing only. The last day was devoted to the works in the Simulation Laboratory of the Kafedra "Teplosilovyye ustanovki" MIITa (Chair of "Thermal Power Plants" of the MIIT). A lecture delivered by P. K. Konakov was on "The Rules of the Complex Heat Exchange". V. T. Kumskov (MIIT) delivered the lecture "An Investigation of the Complex Heat Exchange in Combustion Chambers". V. I. Lebedev reported on

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"An Investigation of the Action of the Degree of Blackening Upon the Heat Exchange in Combustion Chambers". The section for thermal power machines was under the supervision of Professor V. V. Lakhanin (Novosibirsk Institute for Water Transportation Engineers). In his lecture he dealt with a detailed analysis of the heat calculation of piston machines. In this connection, B. Kh. Draganov of the Ukrainskaya akademiya sel'skokhozyaystvennykh nauk (Ukraine Academy of Economics) is mentioned. The collaborators of the Central Scientific Research Institute of Economics and Exploitation of Water Transportation carried out experiments on the application of the principle of similarity for transport calculations. S. N. Dashkov (Military Academy for Supplies and Transportation) spoke about the application of the principle of similarity in the calculation of motorcar engines. M. G. Kruglov and N. P. Kozlov of the MVTU imeni Bauman gave a report on the application of the principle of similarity in the investigation of processes in combustion engines. L. I. Fominskiy (Central Scientific Research Institute of Economics and the Exploitation of Water Transportation) investigated the methods of calculating river transportation. B. I. Buber of the Murmanskoye vyssheye morskoye

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uchilishche (Murmansk Higher College of Navigation) investigated the optimum operation conditions for steam engines for ships. Ye. A. Nikitin of the Kalomenskiy teplovozostroitel'nyy zavod im. Kuybysheva (Kalomensk Steam Locomotive Factory imeni Kuybyshev) spoke about investigations of compressorless Diesel engines by means of the principle of similarity. M. P. Aleksandrov of the MVTU imeni Bauman applied the principle of similarity to the determination of the heating of braking systems. V. D. Zinevich of the Leningradskiy gornyy institut (Leningrad Mining Institute) investigated pneumatic motors produced by the factory "Pnevmatika" of the Lengorsovnarkhoz on the basis of the principle of similarity. B. Kh. Draganov (Ukraine Academy of Economics) and K. Ye. Ucheshko (Nikolayev Shipbuilding Institute imeni Admiral Makarov) studied the application of the principle of similarity to steam-power engines. The section made decisions concerning the further development of the application of the principle of similarity, which are summarized in form of three points. Furthermore, the senior editor of the "Inzhenerno-fizicheskiy zhurnal", Academician of the AS BSSR A. V. Lykov is requested to publish works on the principle of similarity regularly. Energoizdat is requested to

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publish monographs on the principle of similarity. The AS BSSR and the Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya SSSR (Ministry for Higher and Medium Special Training of the USSR) are requested to increase the volume of the present periodical. Suggestions are made concerning the improvement of the degree of education of engineers.

Card 10/10

KUMSKOV, V. T., dotsent, kand.tekhn.nauk; SMIRNOV, V. A., starshiy  
nauchnyy sotrudnik, kand.tekhn.nauk

Theory of similitude and its application in heat engineering.  
Inzh.-fiz.zhur. no.4:142-144 Ap '60. (MIRA 13:8)  
(Dimensional analysis) (Heat engineering)

KUMSKOV, V.T., kandtekh.nauk, dotsent; GORYAINOV, L.A., assistant

Concerning the features of complex heat exchange. Trudy MIIT  
no.125:104-121 '60. (MIRA 13:10)  
(Heat--Transmission)

KUMSKOV, V.T., kand.tekhn.nauk, dotsent; SIDOROV, V.S., inzh.

Heat exchange calculations for boiler burners. Trudy MIIT no.125:132-  
136 '60. (MIRA 13:10)

(Boilers) (Heat--Transmission)

KUMSKOV, V.T.

Study of complex heat exchange in combustion chambers. Trudy MIIT no.139:  
84-90 '61. (MIRA 16:4)

1. Moskovskiy institut inzhenerov zheleznodorozhnogo transporta.  
(Heat exchangers) (Thermodynamics) (Combustion research)

GORJAINOV, L.A., inzh.; KUMSKOV, V.T., kand.tekhn.nauk; LEBEDEV, V.I., inzh.

Studying the heat exchange in the furnace of a boiler by means  
of a model and of the furnace itself. Trudy MIIT no.138:87-92  
'61. (MIRA 14:12)

(Heat---Transmission)  
(Furnaces---Testing)



S/649/61/000/139/007/018  
1028/12'8

AUTHOR: Kumskov, V. T.

TITLE: Study of complex heat exchange in chambers of combustion

SOURCE: Moscow: Institut inzhenerov zheleznodorozhnogo transporta. Trudy, no. 139. 1961.  
Teoriya podobiya i yeye primeneniye v teplotekhnike; trudy pervoi mezhvuzoskoy konferentsii, 84-90

TEXT: A method of calculating heat exchange in furnace chambers replaces that based on Stefan-Boltzmann's law, which is not convenient for a non-equilibrium state of the medium, as the degree of blackness is very difficult to determine in this case. The proposed new method, based on Konakov uses the experimentally verified assumption that a layer in which molecular and radiant temperatures are equal exists near the heat-perceiving surfaces. Formulas determine during the preliminary design calculations the effective radiative surface of the furnace. There are 3 figures.

ASSOCIATION: Moskovskiy institut inzhenerov zheleznodorozhnogo transporta (Moscow Institute of Railway Transport Engineers)

Card 1/1

KUMSKOV, Viktor Timofeyevich, kand. tekhn. nauk; MAKHAN'KO, Mikhail Grigor'yevich; BARTOSH, Ye.T., kand. tekhn. nauk, retsenzent; SMIRNOV, V.A., kand. tekhn. nauk, red.; POBROV, Ye.N., tekhn. red.

[Fundamentals of heat engineering] Osnovy teplotekhniki. Moskva, Transzheldorizdat, 1962. 231 p. (MIRA 15:6)  
(Heat engineering)

KUMSKOV, V.T., kand. tekhn. nauk, dots.; POKALYUK, A.I., kand.  
tekhn. nauk, dots.; PERELET, V.I., dots., retsenzent;  
GRITSEVSKIY, M.Ye., inzh., red.; KHITROVA, N.A., tekhn.  
red.

[Fuel and combustion processes] Toplivo i protsessy go-  
reniya. Moskva, Transzheldorizdat, 1963. 191 p.

(MIRA 16:11)

(Fuel) (Combustion)

L 2918-66 EWT(m)/EPF(c)/I/EWA(c) WE/JXT(CZ)

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BOOK EXPLOITATION

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Kumskov, V. T.; Pokalyuk, A. I.

Fuel and combustion processes (Toplivo i protsessy goreniya) Moscow, Transzheldorizdat, 1963. 191 p. illus., biblio., tables. 5000 copies printed. Authorized as a textbook by Glavnoye upravleniye uchebnymi zavedeniyami MPS. Reviewer: Docent V. I. Perelt; Editor: Engineer M. Ye. Gritsevskiy; Scientific editor for literature on the locomotive economy: V. A. Drobinskiy; Technical editor: N. A. Khitrova; Proofreader: A. A. Tomilina

TOPIC TAGS: combustion, fuel, gaseous fuel, liquid fuel, solid fuel

PURPOSE AND COVERAGE: This book was intended as a textbook for students in power specializations in higher educational institutions for railroad transport and may be used also by students in other specializations and also by engineers and technicians. A brief characterization of sources of thermal power is given, followed by classifications and the physical-chemical properties of fuels. The physical-chemical bases of the combustion processes are analyzed for solid, liquid, and gaseous fuels. The authors express their gratitude to Docent V. I. Perelt and to the members of the Kafedra "Teplotekhniki" of the Khar'kovskiy Institut Inzhenerov

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zheleznodorozhnogo transporta.

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SUBMITTED: 14Aug63

NR REF SOV: 031

OTHER: 000

PC

Card 3/3

NINUA, Nikolay Yermolayevich; KUMSKOV, V.T., red.

[Regenerative rotary air preheaters] Regenerativnyi  
vrashchaiushchiisia vozdukhopodogrevatel'. Moskva,  
Vysshiaia shkola, 1965. 105 p. (MIRA 18:7)

L 20851-66 EPF(n)-2/EWT(1)/EWG(m) WW  
ACCESSION NR: AT5016478

UR/2649/65/000/189/0005/0014

AUTHOR: Kumskov, V. T.

TITLE: Complex heat exchange studies

SOURCE: Moscow. Institut inzhenerov zheleznodorozhnogo transporta. Trudy, no. 189, 1965. Issledovaniye teploobmena v teploenergeticheskikh ustanovkakh i v ustanovkakh dlya polucheniya poluprovodnikovyykh materialov (Investigation of heat exchange in thermal power units and in equipment for producing semiconductor materials). 5-14

TOPIC TAGS: heat exchange, heat transfer, heat conduction, heat convection, heat radiation

ABSTRACT: This article gives a short survey of research on composite heat exchange and indicates the trend of this research. This review indicates that the concept of diffuse transfer of radiant energy in absorbent media is fruitful and is used by most research workers. Expressions for the radiant energy transfer vector must be used which account for peculiarities in the spatial distribution of radiation intensity. Use of integral and differential equations for problems of radiant heat exchange gives practically identical results. Boundary layer equations may also be

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used for problems of radiant heat exchange in absorbing media. Very little experimental research is being done on the mechanism of complex transfer of heat energy by radiation and convection with respect to varying optical density characteristics of the medium. Work is needed in calculating the absorption factor. These considerations may obviously serve as a basis for standard complex heat exchange working formulas in combustion chambers of ovens, boilers and other heat exchange equipment where the transfer of heat energy is accomplished by combined effects of heat conductivity, convection and radiation. Orig. art. has: 8 formulas.

ASSOCIATION: Moskovskiy institut inzhenerov zheleznodorozhnogo transporta (Moscow Institute of Railroad Engineers)

SUBMITTED: 00

ENCL: 00

SUB CODE: TD, IE

NO REF SOV: 030

OTHER: 025

Cord 2/2

S/878/62/000/001/002/003  
D228/D307

AUTHOR: Kumskova, N.M.

TITLE: X-ray study of minerals of the columbite-tantalite group

SOURCE: Ukraine. Glavnoye upravleniye geologii i okhrany nedr. Rentgenografiya mineral'nogo syr'ya. no. 1, Moscow, 1962, 113-119. Trudy Pervogo Vsesoyuznogo soveshchaniya v Kieve 25-29 sentyabrya 1959 g, 113-119

TEXT: The powder method and a 53.7 mm diameter camera were used to investigate the diffraction patterns of natural specimens of columbite-tantalite. Examination of more than 50 Debye powder patterns disclosed the existence of 7 types of diffraction pattern. The movement of individual lines on the Debye powder patterns may be related to the presence of impurities, detected in the samples studied, and not to the variable concentration of Mn and Fe. Data for a specimen with 9.6% Sn showed that, in comparison with the Debye powder

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X-ray study of minerals ...

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pattern of normal columbite-tantalite, numerous additional reflections appeared as the diffraction pattern became generally weaker. There was no cassiterite phase. Roasting at temperatures of up to 1200°C did not alter the diffraction pattern. The stability of tin-tantalite during roasting may be due to the fact that Sn forms isomorphous mixtures with Ta and Nb at high temperatures. There are 2 figures and 2 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut  
mineral'nogo syr'ya (All-Union Scientific Research  
Institute of Mineral Materials)

Card 2/2

MATIAS, V.V.; ROSSOVSKIY, L.N.; SHOSTATSKIY, A.N.; KUMSKOVA, N.M.

On the new mineral - magnocolumbite. Dokl. AN SSSR 148 no.2:  
420-423 Ja '63. (MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo  
syr'ya. Predstavleno akademikom D.S. Korzhinskim.  
(Kukhilyal—Minerals) (Magnesium compounds)